UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB2000-0256

October 4, 2000

Mr. Lawrence C. Evans
Corps of Engineers - Portland District
ATTN: CENWP-CO-GP
P.O. Box 2870
Portland, Oregon 97208-2870

Re: Section 7 Formal Consultation for Agency Creek Bank Stabilization Repair, Yamhill County, Oregon (Corps No. 2000-00066)

Dear Mr. Evans:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) for the Agency Creek Bank Stabilization Repair project in Yamhill County, Oregon. The NMFS concludes in this Opinion that the proposed action is not likely to jeopardize the subject species or destroy or adversely modify critical habitat. Pursuant to section 7 of the ESA, NMFS included reasonable and prudent measures with non-discretionary terms and conditions that NMFS believes are necessary and appropriate to minimize the potential for incidental take associated with this project.

Questions regarding this Opinion should be directed to Nancy Munn of my staff in the Oregon State Branch Office at (503) 231-6269.

Sincerely,

F.r Michael R Crouse

Donna Darm
Acting Regional Administrator

cc: Rose Owens - ODOT
Jeff Smith - ODOT (Biological Opinion)
Randy Reeve - ODFW (Biological Opinion)
Tami Hubert - ODSL

Endangered Species Act - Section 7
Consultation

BIOLOGICAL OPINION

Agency Creek Bank Stabilization Repair
Three Rivers Highway (Hwy 22)
Yamhill County, Oregon

Agency: Federal Highway Administration

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: October 4, 2000

Refer to: OSB2000-0256

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I. BACKGROUND

On September 20, 2000, the National Marine Fisheries Service (NMFS) received a request from the U.S. Army Corps of Engineers (COE) for Endangered Species Act (ESA) section 7 formal consultation for the Agency Creek Bank Stabilization Repair Project (Corps No. 2000-00066). The proposed action is a permanent repair to an emergency bank stabilization built in February, 2000 along Agency Creek. The project applicant, the Oregon Department of Transportation (ODOT), proposes to permanently stabilize the site with a combination of riprap and vegetation.

Agency Creek is a tributary of the South Yamhill River, in southwestern Yamhill County. The project site is on the Three Rivers Highway (Hwy 22) near the Grand Ronde Agency. On February 2, 2000, the (ODOT) was authorized under a Nationwide Permit to construct a bank barb to direct Agency Creek away from Hwy 22. Informal consultation was initiated, but not completed, prior to the February 9, 2000 emergency placement of the barb at the site to prevent losing the road during high water. The constructed barb is larger than permitted by the COE and impedes properly functioning riparian and stream function at the site. To complete the ESA consultation and address the additional rock placed at the site, the ODOT committed to remove a portion of barb and incorporate trees and shrubs into the designed permanent riprap bank.

The effects determination was made using the methods described in *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The COE determined that the proposed action was likely to adversely affect Upper Willamette River (*Oncorhynchus mykiss*) steelhead. The Upper Willamette River (UW) steelhead was listed as threatened under the ESA on March 25, 1999 (64 FR 14517). Critical habitat was designated on February 16, 2000 (65 FR 7764) and protective regulations were issued under section 4(d) of the ESA on July 10, 2000 (65 FR 42423). The project site is also within the range of Upper Willamette River spring chinook salmon (*O. tshawytscha*) which were listed as threatened under the ESA on March 24, 1999 (64 FR 14517). However, the South Yamhill River watershed is not known to support chinook salmon, and consequently, are not considered here.

This biological opinion (Opinion) is based on the information presented in the biological report (BR) and the result of the consultation process. The consultation process has involved site visits, meetings, and correspondence and communications to obtain additional information and clarify the BR. As appropriate, modifications to the proposal to reduce impacts to the indicated species were discussed and enacted. This has included revisions to the original design, including a reduction in the amount of riprap proposed, and planting more shrubs and trees to restore the site.

The objective of this Opinion is to determine whether the action to stabilize the site at Agency Creek is likely to jeopardize the continued existence of the UW steelhead, or destroy or adversely modify critical habitat.

II. PROPOSED ACTION

The ODOT proposes a permanent repair at the project site that is intended to stabilize the streambank during future high water events. The design uses both plants and riprap to stabilize the site. Prior to construction of the proposed action, a portion of the barb constructed in February, 2000, will be removed. The project will be completed prior to the end of the in-water work window of 2000, unless both ODFW and NMFS approve an extension of the work window. The Oregon Department of Fish and Wildlife (ODFW) preferred in-water work period for Agency Creek is from July 1st though October 15th. The ordinary high watermark will be determined in the field and flagged by an ODOT biologist, and will be based on streamside vegetation and physical stream channel characters. In-water work activities include: isolation of the work area, removal of fish, relocation of the existing rock deflector tip, building an access ramp for the track hoe, construction of a toe trench and placement of riprap, placement of large woody debris, and planting of native plants.

The first phase of construction will be isolation of the work area, removal of fish by an ODFW biologist, and then possibly de-watering the work area within the wetted channel. The ODOT will notify Randy Reeve of ODFW at least one week prior to beginning of construction to schedule fish removal. Fish removal will be preformed prior to any other construction activities to ensure minimal impact to salmonids. The preferred method to isolate and de-water the work area would be to use wooden barricades in conjunction with visquine and sandbags. Other methods may be used, but the preferred alternative will be determined by ODFW. The wooden barricades would be set straddling the rock dam and continue parallel to the north bank and to the east, utilizing the existing gravel bars that currently exist to keep the water to the north of the work area. Visquine would be laid over the wooden barricades and the ends would be held in place with sandbags or rocks.

Sediment will be controlled by installing two sediment curtains downstream of the proposed action. A track-hoe excavator will work from the streambed in order to construct the toe trench. An access ramp will be constructed by the track-hoe working from the top of the rock deflector, using material from the point of the existing rock deflector. A toe trench will be excavated for a distance of approximately 120 feet roughly parallel to the highway. The trench and top of bank will be constructed irregularly to create backwater areas with varying currents that would provide refugia for salmonids during high-water events. The toe trench excavation will require the removal of approximately 120 yd^3 of material that will be replaced with class 700 riprap. A total of approximately185 yd^3 of class 700 riprap will be used on the project. Part of the material used in constructing the toe trench will come from the point of the rock deflector.

Above the riprap, enough room shall be allowed for placement of a minimum of three feet of topsoil. A minimum of nine Douglas fir logs (20 - 24 inches in diameter) with root wads attached and a minimum of 20 feet in length will be buried in the newly constructed bank. Sixteen feet of the log will be buried in the bank and under riprap to hold it in place during high flow events. The root wads will extend four

feet or more into the stream channel from the streambank and below the ordinary high water elevation to provide bank stabilization, cover for fish, and back eddies where food will accumulate for fish.

In addition, willow cuttings will be harvested locally and laid with their tips up within the riprap. This willow layer will incorporate one cutting every four inches in the riprap. The bank area downstream of the riprap will be planted with locally cut native willows. The willow cutting shall be planted in horizontal rows with three willows per yard. Three rows will be planted three feet apart vertically above the wetted channel. By planting the vertical bank with willows, even though it will continue to experience slab failure, some plants will remain and grow. Following in-water construction work, the riparian area will be planted with native trees, shrubs and a herbaceous ground cover of native grasses.

The in-water work with the track hoe will take approximately two days. The sequence of proposed activities is as follows:

Isolation of the work area from flows in Agency Creek;
Install sediment curtain at 2 locations;
Removal of fish by ODFW;
Removal of nose of existing rock deflector;
Construction of a toe trench and placement of riprap;
Placement of geo-grid and soil in area behind riprap;
Placement of large woody material;
Planting of native willows in riprap and soil bank;
Removal of isolation barriers and re-establishment of the wetted channel; and
Planting of trees, shrubs, and herbaceous ground cover in riparian area.

III. BIOLOGICAL INFORMATION AND CRITICAL HABITAT

Although there are currently limited data to assess population numbers or trends, NMFS believes that steelhead stocks comprising the UW steelhead Evolutionarily Significant Unit (ESU) are depressed relative to past abundance. The status and relevant biological information concerning UW steelhead are well described in the proposed and final rules from the Federal Register (63 FR 11798, March 10, 1998; and 64 FR 14517, March 25, 1999, respectively), and Busby *et al.* (1995,1996).

UW steelhead are a late run winter steelhead. Hatchery fish are widespread throughout the region. Both summer steelhead and early-run winter steelhead have been introduced to the basin and escape to spawn naturally in substantial numbers. Winter steelhead are in steep decline after exhibiting wildly fluctuating abundance. Recent average adult abundance has been estimated at 3,000 fish. Natural fish adult returns in 1995 were the lowest in 30 years. Declines have been recorded in almost all natural populations. Natural steelhead integrity is at risk from introduced summer steelhead.

Upstream spawning migration of winter steelhead primarily begins in March and April, and peak spawning occurs from April through June. Adult steelhead use the South Yamhill River as a migratory corridor and spawn in the upper reaches. Parr emerge from the gravel in late spring/early summer, rear in the stream for one or two years, and outmigrate during spring run-off as smolt.

Critical habitat for UW steelhead includes all river reaches accessible to steelhead upstream of Willamette Falls to the Calapooia River. Freshwater critical habitat includes the stream, stream bottom, and riparian zone. Riparian areas include areas adjacent to a stream that provide the following functions: shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody material (LWM) or organic matter. The proposed action would occur in designated critical habitat for UW steelhead.

IV. EVALUATING PROPOSED ACTIONS

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of defining the biological requirements and current status of the listed species and evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action, (2) the environmental baseline, and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmon's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize the listed or proposed species, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' proposed or designated critical habitat. The NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NMFS concludes that the action will destroy or adversely modify critical habitat it must identify any reasonable and prudent measures available.

For the proposed action, NMFS' jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NMFS' critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for migration, spawning, and rearing of the UW steelhead under the existing environmental baseline.

A. Biological Requirements

The first step in the methods NMFS uses for applying the ESA section 7(a)(2) to listed salmon is to define the species' biological requirements that are most relevant to each consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess to the current status of the listed species, NMFS starts with the determinations made in its decision to list UW steelhead for ESA protection and also considers new data available that is relevant to the determination (Busby et al., 1995, 1996).

The relevant biological requirements are those necessary for UW steelhead to survive and recover to naturally reproducing population levels at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environmental.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful migration, spawning, holding, and rearing. The current status of the UW steelhead, based upon their risk of extinction, has not significantly improved since the species was listed.

B. Environmental Baseline

The defined action area is the area that is directly and indirectly affected by the action. The direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect affects may occur throughout the watershed where actions described in this Opinion lead to additional activities or affect ecological functions contributing to stream degradation. As such, the action area for the proposed activities include the immediate watershed containing the bank stabilization and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the streambed and streambank of Agency Creek extending upstream to the edge of disturbance, and extending 100 feet downstream of disturbance. Increased turbidity is not expected downstream of this area. Other reaches of Agency Creek or the Yamhill River watershed are not expected to be directly or indirectly impacted.

Agency Creek is a tributary of the South Yamhill River, within the Upper Willamette River basin. The project site is located adjacent to Agency Creek, approximately 1,056 feet upstream of the South

Yamhill River. Geology of the South Yamhill River floodplain is dominated by alluvium, which is composed of unconsolidated and poorly sorted clay, silt, sand, and gravel. Consequently, the most common soil-types are poorly drained to moderately well-drained silty clay loams and silt loams. This provides adequate availability and recruitment of spawning gravels, but streambank erosion can result in significant siltation in gravel deposits and sedimentation of benthic areas.

Agency Creek is a moderate gradient stream with a gravel/cobble substrate. Forestry is the dominant land use. Stream flow is unregulated. According to the Oregon River Information System (ORIS), riparian cover exceeds 75% of the streambank, and bank erosion is low (<25%). There are no known downstream barriers to downstream fish use. Winter steelhead use Agency Creek for spawning and juvenile rearing.

The South Yamhill River from Willamina Creek to the headwaters is listed on the Oregon Department of Environmental Quality (ODEQ) 303(d) List of Water Quality Limited Water Bodies for not meeting the bacteria criterion. The sample site was located 0.3 miles downstream of the Agency Creek confluence. Water quality criteria are deficient in additional reaches of the South Yamhill River downstream of Willamina Creek. Deficient criteria include temperature, flow modification and bacteria.

Based on the best available information on the current status of UW steelhead range-wide; the population status, trends, and genetics; and the poor environmental baseline conditions within the action area, NMFS concludes that the biological requirements of the identified ESU within the action area are not currently being met. River basins have degraded habitat resulting from agricultural and forestry practices, water diversions, and urbanization. The following habitat indicators are either at risk or not properly functioning within the action area: Turbidity/sediment; chemical contamination/nutrients; large woody debris; off-channel habitat; peak flows; and disturbance history. Actions that do not maintain or restore properly functioning aquatic habitat conditions would be likely to jeopardize the continued existence of UW steelhead.

V. ANALYSIS OF EFFECTS

A. Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in the document *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The effects of actions are expressed in terms of the expected effect - restore, maintain, or degrade - on aquatic habitat factors in the project area.

The proximity of the highway to Agency Creek has reduced the habitat complexity of the stream reach by limiting stream migration within its floodplain and preventing the development of a riparian canopy.

The interface between the highway and the creek will continue to cause erosion problems in the future if no action is taken to correct it.

The proposed action will cause temporary impacts to steelhead and their habitat, but will provide a long-term benefit by reducing local erosion and enhancing riparian overstory cover. The track hoe will be working directly in the stream. A toe trench will be excavated in the stream and large riprap will also be placed in the stream. These activities have the potential to directly harass, harm, wound or kill juvenile steelhead rearing at the site. By working during the low flow time of year, the impact is decreased because less work is occurring in the wetted channel. Isolating the work area and fish removal from the isolation area by an experienced fish biologist will also reduce the magnitude of the take.

Project activities will increase turbidity in the stream. Juvenile steelhead are visual predators, and low water clarity decreases foraging success. If steelhead are present, the increased turbidity will decrease feeding activity and likely displace fish from the project area. Erosion control measures implemented as part of the proposed action are intended to minimize turbidity increases.

The riprap placed along the streambank of Agency Creek reduces the potential quality of riparian habitat available. Herbaceous growth at the site will be reduced, as will habitat complexity. The riprap bank will reduce foraging and holding opportunities compared to a properly functioning streambank. This impact will be reduced by staggering the toe of the boulders to create flow refuges, placing large woody material with root wads in the riprap, and planting trees among the boulders to increase shade and organic inputs. The irregular toe and large woody material will add complexity to the reach, thus creating low velocity areas for steelhead and provide cover. The trees and shrubs will shade the stream during warm summer months and increase organic input to the stream.

The NMFS expects the effects of the proposed action are likely to maintain or restore each of the habitat elements over the long term, greater than five years, based on the current condition of the site. In the short term, a temporary increase in sediment entrainment and turbidity, and disturbance of riparian habitat is expected. UW steelhead may be killed, or more likely, temporarily displaced by the riprap placement along Agency Creek.

B. Effects on Critical Habitat

NMFS designates critical habitat based on physical and biological features that are essential to the listed species. Essential features for designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. Critical habitat for UW steelhead consists of all waterways below naturally impassable barriers including the project area. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter.

The proposed actions will affect critical habitat. In the short term, temporary increase of sediments and turbidity and disturbance of riparian habitat is expected. In the long term, a slow recovery process will occur as the plants mature. Also, habitat complexity will be increased at the site by the addition of the boulder clusters and large woody material. The NMFS does not expect that these actions will diminish the value of the habitat for survival of UW steelhead.

C. Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." The action area has been defined as upstream to the edge of disturbance extending 100 feet downstream of project activities in Agency Creek. A wide variety of actions occur within the Yamhill River basin and the Upper Willamette River watershed, within which the action area is located. NMFS is not aware of any significant change in such non-Federal activities that are reasonably certain to occur. NMFS assumes that future private and State actions will continue at similar intensities as in recent years. Future ODOT transportation projects are planned in the Upper Willamette River watershed. Each of these projects will be reviewed through separate section 7 consultation processes and therefore are not considered cumulative effects.

VI. CONCLUSION

After reviewing the current status of UW steelhead, the environmental baseline for the action area, the effects of the proposed Agency Creek bank stabilization repair project and the cumulative effects, it is the NMFS biological opinion that this project, as proposed, is not likely to jeopardize the continued existence of the Upper Willamette steelhead, and is not likely to destroy or adversely modify designated critical habitat. This conclusion is based on findings that the proposed action will use soil stabilization, large woody material, and revegetation techniques to restore the slope in addition to the riprap.

VII. CONSERVATION RECOMMENDATIONS

Section 7 (a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS does not request any conservation recommendations for this action.

VIII. REINITIATION OF CONSULTATION

This concludes formal consultation on the Agency Creek bank stabilization repair project. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if: 1) The amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this Opinion; or 4) a new species is listed or critical habitat is designated that may be affected by the action. In instances
where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

IX. REFERENCES

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this Opinion.

Busby, P., S. Grabowski, R. Iwamoto, C. Mahnken, G. Matthews, M. Schiewe, T. Wainwright, R. Waples, J. Williams, C. Wingert, and R. Reisenbichler. 1995. Review of the status of steelhead (*Oncorhynchus mykiss*) from Washington, Idaho, Oregon, and California under the U.S. Endangered Species Act. 102 p. plus 3 appendices.

Busby, P., T. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, and I.V. Lagomarsino. 1995. Status review of west coast steelhead from Washington, Idaho, Oregon, and California

DEQ 1996. 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1996. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

DEQ 1998. Draft 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1998. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

DSL 1996. Essential Indigenous Salmonid Habitat, Designated Areas, (OAR 141-102-030). Oregon Division of State Lands. Portland, Or. 1996.

NMFS (National Marine Fisheries Service) 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon.

ODFW 1996. Database -- Salmonid Distribution and Habitat Utilization, Arc/Info GIS coverages. Portland, Or. 1996. (rainbow.dfw.state.or.us/ftp/).

X. INCIDENTAL TAKE STATEMENT

Sections 4 (d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with
the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

A. Amount or Extent of the Take

The NMFS anticipates that the action covered by this Opinion has more than a negligible likelihood of resulting in incidental take of UW steelhead because of detrimental effects from increased sediment levels (non-lethal) and the potential for direct incidental take during the excavation of the toe trench and placement of riprap (lethal and non-lethal). Direct incidental take will occur during the handling of UW steelhead while isolating the work area from the active channel and removing steelhead from the area to be de-watered. There is also the potential for harm because of significant habitat modification. Effects of actions such as these are largely unquantifiable in the short-term, and are not expected to be measurable as long-term effects on coho habitat or population levels. Therefore, even though NMFS expects some low level incidental take to occur due to the actions covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as these, the NMFS designates the expected level of take as "unquantifiable." Based on the information in the biological report, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the actions

covered by this Opinion. The extent of the take is limited to the reach of Agency Creek immediately adjacent to project activities and extending 100 feet downstream.

B. Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimizing take of the above species. Minimizing the amount and extent of take is essential to avoid jeopardy to the listed species.

1. To minimize the amount and extent of incidental take from project activities within and adjacent to Agency Creek, measures shall be taken to limit the duration and extent of in-water work including removal of fish from the work area, excavation of the toe trench and riprap placement, and to schedule such work when the fewest number of fish are expected to be present.

2. To minimize the amount and extent of incidental take from construction activities near the creek, effective erosion and pollution control measures shall be developed and implemented to minimize the movement of soils and sediment both into and within the river, and to stabilize bare soil over both the short term and long term.

3. To minimize the amount and extent of take from loss of instream habitat and to minimize impacts to critical habitat, measures shall be taken to avoid impacts to riparian and instream habitat, or where impacts are unavoidable, to replace lost riparian and instream function.

4. To ensure effective implementation of the reasonable and prudent measures, all erosion control measures and plantings for site restoration shall be monitored and evaluated both during and following construction.

C. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the COE must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To Implement Reasonable and Prudent Measure #1, above, the COE shall ensure that:

    a. All work within the two-year floodplain of Agency Creek will be done during the ODFW in-water work window of July 1st to October 15th. This includes work within the active channel and along the streambank, but does not necessarily include the plantings at the top of the bank.

b. An ODFW fish biologist must be present during all activities associated with isolating the work area from the active channel and de-watering the work area. All fish handling and removal activities must be conducted by the ODFW biologist. Fish handling must be minimized to greatest extent possible.

c. Rock will be placed individually and not end dumped. Placement will be performed in the dry as much as possible, and from the top of the bank where possible.

2. To Implement Reasonable and Prudent Measure #2, above, the COE shall ensure that all erosion control and pollution control measures included in the August 2000, BA are included as terms and conditions of this consultation. Based on prior project evaluations, the NMFS requires COE to give particular attention to the following measures:

a. Vehicle maintenance, re-fueling of vehicles and storage of fuel shall be done at least 150 feet from the 2-year flood elevation or within an adequate fueling containment area.

b. At the end of each work shift, vehicles shall be stored greater than 150 feet (horizontal distance) from the 2-year flood elevation, or in an area approved by the ODOT Engineer.

c. All erosion control devices will be inspected daily during project activities to ensure that they are working adequately. Work crews will be mobilized to make immediate repairs to the erosion controls, or to install erosion controls during working and off-hours. Should a control measure not function effectively, the control measure will be immediately repaired or replaced. Additional controls will be installed as necessary.

d. If soil erosion and sediment resulting from construction activities are not effectively controlled, the ODOT Engineer will limit the amount of disturbed area to that which can be adequately controlled.

3. To Implement Reasonable and Prudent Measure #3, above, the COE shall ensure that:

a. Boundaries of the clearing limits will be flagged by the ODOT Project Inspector. Ground will not be disturbed beyond the flagged boundary.

b. Alteration of native vegetation will be minimized.

c. Riparian plantings will be completed as described in the August, 2000 biological report.

4. To Implement Reasonable and Prudent Measure #4, above, the COE shall ensure that:

a. All significant riparian replant areas will be monitored for a minimum 3-year period to insure the following:

   i. Finished grade slopes and elevations will perform the appropriate role for which they were designed.
   ii. Plantings are performing correctly and have an adequate success rate. An adequate success rate is 80%.

b. Failed plantings and structures will be replaced, if replacement would potentially succeed. If not, plantings at another appropriate location will be done during the next available planting season.

c. By December 31 of each year, ODOT shall submit to NMFS a monitoring report that addresses the success of erosion control measures and of the plantings. At a minimum, the monitoring report must include photographs of the erosion control measures and plantings, with a short narrative that addresses riparian function. Monitoring reports will be submitted to:

   Oregon Branch Chief
   National Marine Fisheries Service
   525 NE Oregon Street, #500
   Portland, Oregon 97232-2737

d. If a dead, sick or injured steelhead is located, initial notification must be made to Nancy Munn, Ph.D., NMFS, telephone: (503) 230-6269. Care will be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured species or preservation of biological material from a dead animal, the finder has the responsibility to carry out instruction provided by Dr. Munn to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.